

AMENDMENTS TO THE CLAIMS:

Claim 1. (Previously presented) An electric power steering device for transmitting rotation of a steering assisting electric motor to a steering mechanism through a small gear and a large gear, comprising:

a first member on a rotary shaft of said electric motor;

a second member at one end of the small gear; and

an elastic member between the first and second members for transmitting a torque between the two members,

wherein said elastic member has a first torsional elastic modulus when a torsion angle between the first and second members is less than a predetermined angle, and a second torsional elastic modulus when said torsion angle is one of equal to and larger than the predetermined angle,

wherein said first torsional elastic modulus is smaller than said second torsional elastic modulus,

wherein said elastic member comprises a radially and axially extending plate-shaped portion,

wherein at least one of said elastic member and said first and second members comprises a circumferentially extending projection at an outer periphery,

wherein, if said elastic member comprises said circumferentially extending projection, then the circumferentially extending projection contacts said first and second members when no torque or low torque is applied to one of said first and second members, and

wherein, if at least one of said first and second members comprises said circumferentially extending projection, then a radially extending surface of the

circumferentially extending projection contacts said elastic member when no torque or low torque is applied to one of said first and second members.

Claim 2. (Previously presented) The electric power steering device according to Claim 1,

wherein said elastic member comprises a plurality of radially and axially extending plate-shaped portions,

wherein said first and second members comprise protrusions for meshing in a torque transmittable manner while clamping the elastic member in a rotational direction of the rotary shaft,

wherein the corresponding protrusions of the first and second members comprise clamping faces acting as torque transmission faces capable of clamping the elastic member in-between, and

wherein at least one of said clamping faces and a clamped face of said elastic member as the torque transmission faces of the elastic member confronting the clamping faces comprise a plurality of said circumferentially extending projections for establishing the first torsional elastic modulus by compressing the elastic member locally when said torsion angle is less than the predetermined angle.

Claim 3. (Previously presented) An electric power steering device for transmitting rotation of a steering assisting electric motor to a steering mechanism, comprising:
a first member on a rotary shaft of said electric motor;
a second member at one end of the small gear; and

an elastic member between the first and second members for transmitting a torque between the two members;

wherein said first and second members comprise a plurality of projections for meshing in a torque transmittable manner while clamping the elastic member in a rotating direction of the rotary shaft,

wherein said elastic member comprises a projection having a bifurcated structure defining a slit portion, and

wherein the elastic member is compressed to collapse the slit cavity substantially when said torsion angle is one of equal to and larger than the predetermined angle.

Claim 4. (Previously presented) A joint for use in an electric power steering device, comprising:

a first member;

a second member; and

an elastic member between the first and second members for transmitting a torque between the two members,

wherein said elastic member has a first torsional elastic modulus when a torsion angle between the first and second members is less than a predetermined angle, and a second torsional elastic modulus when said torsion angle is one of equal to and larger than the predetermined angle,

wherein said first torsional elastic modulus is smaller than said second torsional elastic modulus,

wherein said elastic member comprises at least one radially and axially extending

plate-shaped portion,

wherein at least one of said plate-shaped portion and said first and second members comprises a circumferentially extending projection at an outer periphery,

wherein, if said plate-shaped portion comprises said circumferentially extending projection, then the circumferentially extending projection contacts said first and second members when no torque or low torque is applied to one of said first and second members, and

wherein, if at least one of said first and second members comprises said circumferentially extending projection, then a radially extending surface of the circumferentially extending projection contacts said first and second members when no torque or low torque is applied to one of said first and second members.

Claim 5. (Canceled).

Claim 6. (Previously presented) A joint for use in an electric power steering device, comprising:

a first member;

a second member; and

an elastic member between the first and second members for transmitting a torque between the two members,

wherein said elastic member has a first torsional elastic modulus when a torsion angle between the first and second members is less than a predetermined angle, and a second torsional elastic modulus when said torsion angle is one of equal to and larger than the

predetermined angle,

wherein said first torsional elastic modulus is smaller than said second torsional elastic modulus, and

wherein said elastic member comprises a projection having a bifurcated structure defining a slit portion.

Claim 7. (Previously presented) A joint for use in an electric power steering device, comprising:

a first member;

a second member; and

an elastic member between the first and second members for transmitting a torque between the two members;

wherein said elastic member has a first torsional elastic modulus when a torsion angle between the first and second members is less than a predetermined angle, and a second torsional elastic modulus when said torsion angle is one of equal to and larger than the predetermined angle,

wherein said first torsional elastic modulus is smaller than said second torsional elastic modulus, and

wherein said elastic member comprises:

a first layer having a first elastic modulus; and

a second layer having a second elastic modulus that is higher than said first elastic modulus.

Claim 8. (Previously presented) An electric power steering device comprising:

 a first member comprising a rotary shaft of an electric motor;

 a second member comprising a gear of a steering mechanism; and

 an elastic member between the first member and the second member and having at least a two-stage torsional elastic modulus,

 wherein said two-stage torsional elastic modulus comprises a first torsional elastic modulus corresponding to a first range of torsion angles and a second torsional elastic modulus corresponding to a second range of torsion angles, and

 wherein said elastic member comprises:

 a first layer having a first elastic modulus; and

 a second layer having a second elastic modulus that is higher than said first elastic modulus.

Claim 9. (Previously presented) The device of claim 8, wherein said first torsional elastic modulus corresponds to an angle between the first and second members that is less than a predetermined angle and said second torsional elastic modulus is larger than the first torsional elastic modulus when the angle between the first and second members is one of equal to and larger than the predetermined angle.

Claim 10. (Previously presented) An electric power steering device comprising:

 a first member comprising a rotary shaft of an electric motor;

 a second member comprising a gear of a steering mechanism; and

 an elastic member between the first member and the second member and having at

least a two-stage torsional elastic modulus,

wherein said two-stage torsional elastic modulus comprises a first torsional elastic modulus corresponding to a first range of torsion angles and a second torsional elastic modulus corresponding to a second range of torsion angles,

wherein said first torsional elastic modulus corresponds to an angle between the first and second members that is less than a predetermined angle and said second torsional elastic modulus is larger than the first torsional elastic modulus when the angle between the first and second members is one of equal to and larger than the predetermined angle, and

wherein said elastic member comprises a foam portion having said first elastic modulus

Claim 11. (Canceled).

Claim 12. (Previously presented) The device of claim 8, wherein said first and second layers extend radially outward from a body portion of said elastic member.

Claim 13. (Previously presented) The device of claim 8, wherein said first layer comprises two first layers that sandwich said second layer.

Claim 14. (Previously presented) The device of claim 8, wherein each of said first member and said second member comprises a protrusion.

Claim 15. (Previously presented) The device of claim 8, wherein said elastic member

comprises:

a body portion; and

a plurality of plate-shaped portions radially extending from said body portion.

Claim 16. (Canceled).

Claim 17. (Previously presented) The device of claim 3, wherein said bifurcated structure comprises a pair of branch portions defining said slit portion between said pair of branch portions.

Claim 18. (Previously presented) The joint of claim 6, wherein said bifurcated structure comprises a radially extending bifurcated structure.

Claim 19. (Previously presented) The joint of claim 6, wherein said bifurcated structure comprises a pair of branch portions defining a slit between the pair of branch portions.

Claim 20. (Previously presented) The joint of claim 7, wherein each of said first and second layers extends radially and axially.

Claim 21. (Previously presented) The device of claim 8, wherein each of said first and second layers extends radially and axially.

Claim 22. (New) The device of claim 1, wherein said elastic member comprises said

circumferentially extending projection and the circumferentially extending projection contacts said first and second members when no torque is applied to one of said first and second members.

Claim 23. (New) The device of claim 1, wherein one of said first and second members comprises said circumferentially extending projection and said circumferentially extending projection contacts said elastic member when no torque is applied to one of said first and second members.

Claim 24. (New) The device of claim 1, wherein said first member comprises a connection hole that receives said rotary shaft in a press-fit condition.

Claim 25. (New) The device of claim 1, wherein said second member comprises a serrated joint hole that receives a protruding portion of said small gear.